

**Aim:** Through minimally-invasive video-assisted thoracoscopic surgery (VATS) and evolving pulmonary rehabilitation services, ERAS has been successfully implemented in thoracic surgery, reducing recovery time and complications. We present our tailored ERAS protocol and results for patients undergoing lung resection in a large, tertiary-level centre.

**Methods:** Retrospective case-note analysis of elective, anatomical lung resections during a 3-month period starting July 2014. Key elements of our protocol were evaluated, including preoperative optimisation, surgical approach and analgesia delivery.

**Results:** 56 patients underwent pulmonary resection (9.8% pneumonectomy, 90.2% lobectomy). Median age was 70 years. Lung carcinoma was the foremost indication (92.1%), predominantly T2 (51.0%) N0 (58.8%) staging. Smoking cessation services were utilised in 28.6% of eligible cases; carbohydrate loading in 30.6%. Preoperative sedation fell to 3.9%. Day case admissions were 70.6%.

64.7% of procedures were VATS (conversion rate 15.7%). Paravertebral and intercostal blocks were used in 88.2% and patient-controlled analgesia in 96.1%.

Most frequent complications were cardiovascular (AF/PE/DVT) (8%). Unexpected ICU admissions occurred in 3.9%, with 1 mortality (2.0%). Median length-of-stay (LOS) was 5 days with readmission rate (<30 days) 11.6%.

**Conclusion:** ERAS can successfully be applied to thoracic surgery patients. In our centre, LOS reduced by 2 days for major resections, with fastest recovery following minimally-invasive surgery. This could be reduced further by optimising preoperative fitness.

#### 0650: OXYGEN REQUIREMENTS ON ADMISSION PREDICT LONGER LENGTH OF STAY IN PAEDIATRIC EMPYEMA: FINDINGS FROM A NINE-YEAR NATIONAL REFERRAL CENTRE RETROSPECTIVE STUDY

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**Aim:** The aim for this study was to examine for predictors of length-of-stay (LOS) from admission data in paediatric empyema patients, referred to our tertiary referral centre.

**Methods:** A retrospective chart review of children, aged 0–16, admitted between 2005–2013 diagnosed with empyema (n = 104) was performed. Patient demographics, clinical manifestations, time to transfer (TTT), presenting parameters, bacteriology data, management and complications were recorded. Statistical analysis of these factors was performed.

**Results:** We found a statistically significant difference in LOS between the patients requiring O<sub>2</sub> on admission (non-ventilated) and those who did not (O<sub>2</sub> group 14.2 days vs. Non-O<sub>2</sub> group 12.2 days, p = 0.044). Patients requiring ICU on admission had longer LOS (p = 0.019). Most factors did not predict LOS, including TTT (p = 0.852), WCC (P = 0.759), CRP (P = 0.117) or fever (p = 0.368). A pre-existing drain at transfer did not reduce LOS (p = 0.11). We also found oxygen usage in peripheral units was associated with earlier transfer (p = 0.0003) and oxygen-requiring patients were treated earlier (O<sub>2</sub> group 1.04 vs. Non-O<sub>2</sub> group 2.02 p = 0.013) but with no significant difference in the treatment modality (p = 0.658).

**Conclusion:** Oxygen requirements at admission are associated earlier treatment but a significantly longer length of stay in paediatric empyema patients.

#### 0653: ELECTRONIC CHEST DRAINS—DO THEY IMPROVE PATIENT CARE?

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**Aim:** We aim to evaluate the impact of electronic chest drains on post-operative recovery in thoracic surgery patients undergoing elective lung resection. These were introduced in March 2014.

**Methods:** Lists of patients who underwent elective lobectomy between January and March 2014 (Phase 1) and May to July 2014 (Phase 2) were generated. Case note review for each phase took place. Data relating to

demographics, drain type and output, air leak, length of stay and complications was collected on a standardised data collection form and analysed using Microsoft Excel.

**Results:** The median length of stay was 5 days for phase 1 and 6.5 days for phase 2. The median length of drain use was 3 days for electronic and 5 days for traditional drains. Using the tradition drain 37% of patients were discharged with the portable atrium drain compared to 18% of patients using electronic drains.

**Conclusion:** Length of stay and drain use were reduced using the electronic drain. Fewer patients were discharged with drains in situ. We are currently investigating the impact of this on the use of local nurse lead drain clinics.

#### 0694: MANAGEMENT OF STANFORD TYPE B AORTIC DISSECTION: A RETROSPECTIVE SINGLE CENTRE EXPERIENCE

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**Aim:** Medical management is the mainstay in the treatment of patients with Stanford Type B aortic dissection; however surgery is performed in a select few. The management of patients diagnosed at our centre was reviewed.

**Methods:** In this retrospective study between 1996–2014; 43 patients with Type B Aortic dissection were identified and analysed.

**Results:** 33 (77%) of patients were managed medically. 34 (79%) patients were referred for surgical opinion, of which 10 (23%) underwent surgical intervention. There was no difference in the mean age of the patient's medical vs surgical (67 ± 8 vs 65 ± 11) years. Of the 10 cases that underwent surgery, 3 as emergency, one had an endovascular stent. There was no operative mortality but one stroke, one spinal cord ischemia and vocal-cord palsy was noted. Those managed medically had stable dissection; 2 patients with thrombosed false lumen. On follow-up 10 (30%) of medically treated patients and 3 (30%) in the surgical group died.

**Conclusion:** Surgical management of type B aortic dissection was more likely to be offered in emergency situation with good outcomes and acceptable risks. Our data demonstrates no difference in the long term outcomes on the type of intervention chosen in the management of these patients.

#### 0907: CAN CCS AND NYHA AND LUNG FUNCTIONS BE AN INDICATOR OF MORTALITY IN FEMALE CORONARY ARTERY BYPASS GRAFTING PATIENTS FOR RISK STRATIFICATION IN CARDIAC SURGERY

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**Aim:** The European System for Cardiac Operative Risk Evaluation (EuroSCORE) is a commonly applied risk prediction model, however it does not predict gender specific mortality following Coronary Artery Bypass Surgery (CABG). The predictive value of the Canadian Cardiovascular Society (CCS) Angina Grading Scale, the New York Heart Association (NYHA) Dyspnoea Classification, and lung function tests (FEV1/FVC ratios), were assessed.

**Methods:** We retrospectively analysed gender specific mortality using standard and logistic EuroSCOREs and NYHA, CCS and FEV1/FVC ratios in 4998 patients (79% male) who underwent CABG surgery over an 11-year period at one institution. Risk groups were identified by calculating a mean score from CCS, NYHA and FEV1/FVC ratios.

**Results:** Analysis of the data from 4998 patients demonstrated an overall death rate of 2%. Employing the CCS classification, non-gender specific mortality was 1.02% in the low-risk group male/females, 2.31% in the moderate-risk group and the high risk groups 5.60% in males and 7.92% in females (in the high-risk group).

**Conclusion:** Our results demonstrate significant variability in mortality rates within a specified risk category depending on the gender and indicator used for risk stratification. Gender specific mortality appears greatest in the higher-risk cohort. This has important implications for identifying high-risk patients in cardiac surgery.